



**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE  
(003259-87559)**

**Applicants:** William Benton and Edward Miller  
**Serial No.:** 10/714,548 **Group Art Unit:** 1712  
**Filed:** November 14, 2003 **Examiner:** John J. Figueroa  
**Title:** Polymer Compositions

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Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

**DECLARATION UNDER 37 C.F.R. § 1.132**

Dear Sir:

I, Edward Miller, am an applicant in the above-captioned patent application, being a co-inventor of the subject matter disclosed and claimed therein. I hereby declare as follows:

1. I reside at 6417 Rainier Road, Plano, TX 75023.
2. My education includes a Bachelor of Science degree in Chemistry earned at the University of Bridgeport, Bridgeport, CT in 1974.
3. I have been employed as a chemist in the field of oil field chemicals for a total of 25 years. I have been employed by Fritz Industries, Inc. for the past eight years.
4. I have read and understood U.S. Patent No. 5,620,947 to Elward-Berry, U.S. Patent No. 5,080,809 to Stahl et al., U.S. Patent No. 5,789,349 to Patel, and U.S. Patent No. 6,124,244 to Murphey. I have also read and understood the claims in the above-referenced patent application, as amended in the Response to the Office Action dated February 27, 2006.

5. With my co-inventor, I discovered the composition defined by the claims of the subject patent application, comprising a copolymer having functionality including at least sulfonate groups and carboxylate groups, wherein the copolymer is substantially soluble in an 80% cesium formate solution, and when dissolved in an 80% cesium formate solution at a concentration of 2 pounds of the copolymer per barrel, measured at 120°F, yields an apparent viscosity of at least 20 cPs, a plastic viscosity of at least 15 cPs, and a yield point of at least 5 lb/100 ft<sup>2</sup>.
6. In substantial research and development work leading to the present invention, numerous polymers and copolymers were prepared and tested by and for me. In particular, for example, I tested numerous copolymers having functionality including at least sulfonate groups and carboxylate groups for solubility in cesium formate solution. I have also tested multiple copolymers within the scope of the disclosures of Elward-Berry, Stahl, Patel, and Murphey. None of the tested copolymers within the scope of the disclosures of Elward-Berry, Stahl, Patel, and Murphey is substantially soluble in an 80% cesium formate solution.
7. Because the tested copolymers within the scope of the disclosures of Elward-Berry, Stahl, Patel, and Murphey are not soluble in an 80% cesium formate solution, it is not possible for them to possess the physical properties required by the pending claims of the subject patent application, i.e., an apparent viscosity of at least 20 cPs, a plastic viscosity of at least 15 cPs, and a yield point of at least 5 lb/100 ft<sup>2</sup>, *when dissolved* in 80% cesium formate solution.
8. In my opinion, none of the above-mentioned patents discloses a copolymer having functionality including at least sulfonate groups and carboxylate groups,

having a weight average molecular weight of 1,000,000 to 5,000,000, that when dissolved in an 80% cesium formate solution at a concentration of 2 pounds of the copolymer per barrel, measured at 120°F, yields an apparent viscosity of at least 20 cPs, a plastic viscosity of at least 15 cPs, and a yield point of at least 5 lb/100 ft<sup>2</sup>.

9. I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under section 1001 of Title 18 of the United States Code, and that such willful false statements may jeopardize the validity of the application or any patent issuing thereon.

7/26/06  
Date

Edward E. Miller  
Edward Miller

**Banner & Witcoff, Ltd.**  
28 State Street, 28th Floor  
Boston, MA 02109  
Telephone: (617) 227-7111  
Facsimile: (617) 227-4399